



Citation for published version:

Lazetic, P 2020, 'Studying Similarities and Differences in Higher Education Organisations based on their Websites – Comparative Methodological Approaches and Research Potential', *International Journal of Social Research Methodology*, vol. 23, no. 1, pp. 75-90. <https://doi.org/10.1080/13645579.2019.1672286>

DOI:

[10.1080/13645579.2019.1672286](https://doi.org/10.1080/13645579.2019.1672286)

Publication date:

2020

Document Version

Peer reviewed version

[Link to publication](#)

This is an Accepted Manuscript of an article published by Taylor & Francis in *International Journal of Social Research Methodology* on 14/10/2019, available online:
<http://www.tandfonline.com/10.1080/13645579.2019.1672286>

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Studying Similarities and Differences in Higher Education Organisations based on their Websites – Comparative Methodological Approaches and Research Potential

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Abstract

This article discusses the possible ways in which visual research methodologies can be extended and applied to study similarities and differences in higher education institutions (and systems) in the context of the visual and digital turn in social science methodologies. In particular, the article focuses on the methodological potential of the institutional website analysis as a fruitful approach in comparative higher education research. In the presentation of the potential of this research approach, the article focuses on two specific comparative methodological issues: different purposes of comparisons and different organisational aspects which can be compared.

The review of the current state of comparative research based on university websites found that the analyses are largely cross-sectional and focused on issues related to institutional identities and positioning of individual self-identities towards institutions as well as on representations of different types of students. Organisational aspects of structure and hierarchies, disciplinary differences, leadership and management cultures, organisational aesthetics as well studies which focus on representation of non-student groups of university members, are extremely rare and represent potential research frontiers. Most of the reviewed articles are guided too much by

linear causal explanation logic, while other comparative purposes like better description, critique and provision of alternative explanations are less present and potentially could lead to a much better understanding of higher education.

Keywords: higher education; website analysis; comparative organisation studies; comparative purposes

Introduction

Within higher education research, the use of visual research methods to study similarities and differences within and across institutions has been a relatively rare practice. In the context of wider organisational studies, which also include the study of higher education institutions, visual research methods are far more popular and ‘usually involve interpretation of visual cues with the organisational environment (pictures, maps, logos, films, web pages etc), or creation of visual materials in response to the organisational setting’ (Metcalf and Blanco, 2019, p. 154). This article builds upon a previous excellent overview of the application of visual research methods in higher education research (Metcalf and Blanco, 2019) and focuses specifically on the potential of using institutional websites in the study of higher education. By examining website analysis as one of the approaches in visual methods, the article is contextualised within the broader discussion on visual and digital turns in social research methodology and the ways in which researchers should embrace these new tendencies and related challenges. Given the aims of this special issue, the main objective of the article is to consider the range of ways website analyses have been, or could be, applied to the study of differences within and across higher education institutions. We are especially interested in what the study of university websites can contribute to understanding these similarities and differences between higher education institutions and systems, although website analysis can be equally successfully used to study broader issues like higher education policy or to study the academic profession, staff and students in a more general social context.

In the first section of the article we position the discussion on the use of website analysis in higher education research within the broader visual and digital turns in social research. In the

second section we contextualise and problematize university website analyses within existing comparative methodological approaches in visual studies by providing an overview of the key comparative research design choices. Given the focus of this special issue, the purpose of the overview is not to address general methodological and theoretical choices and possibilities related to website-based visual research (e.g. the choice of aspects and layers of multimodal media analysis, concrete analytical techniques like content analysis etc.)¹, but to focus on specific comparative methodological aspects in studying similarities and differences. These specific comparative methodological aspects are: a) the choice of comparative purpose in website analysis, and b) the choice of the organisational aspects in higher education which are compared. The aim here is to outline the possibilities in which comparative website analysis could be designed and against which existing research practice could be assessed. In the third section of the article we conduct a systematic literature review of existing studies based on university and college websites. The aim of this was to survey the current state of research practice and map it against the range of comparative research designs outlined in the first section and identify potential gaps for future research. Finally, we conclude with a general reflection on the topic of the use of website analysis in higher education research, aiming to invite and motivate future researchers to further explore the exciting potential of websites analysis in the study of similarities and differences across institutions and organisations in higher education.

¹ A general overview of theoretical and methodological approaches in visual research as well specific practical and ethical constraints, although not web-site specific, is provided by Metcalfe and Blanco (2019) and Yanow (2014), while Pauwels (2012) provides a multimodal methodological framework for how websites can be studied as cultural expressions.

University Website Analysis and the Visual and Digital Turns in Higher Education

Research

Despite the enormous potential in research of visual dimensions of higher education within broader contemporary society, the field of higher education research seems to be reluctant to embrace two major methodological and epistemological turns in social research practice – visual and digital.

Academia has been often criticised for being very reluctant to accept visual data as relevant for scientific inquiry (Roger 2017), nevertheless some fields have been much more open to the visual turn in research. For example, organisational studies have been one research area particularly successful in contributing to this methodological and epistemological visual turn (Bell, Warren, and Schroeder 2014). The use of visual methods in comparative and international education research seems to gain in popularity (Schreiber and Fischman 2016), yet in its sub-field of higher education research, visual methods remain under-utilised (Metcalf and Blanco 2019; Metcalf 2015) despite the many potential uses of these methods in the area of understanding equity, diversity and inclusion in higher education, the construction and re-interpretation of organizational identities and understanding change in higher education (Metcalf and Blanco 2019, p. 189). The lack of visual research in the study of higher education has been particularly evident in Europe due to the combined effects of two research traditions. Firstly, higher education research in mainland Europe tends to focus on issues of management, organisation and quality rather than students and social inequalities (Ramirez and Tiplic 2014), which are the topics that in other contexts like USA, Canada, UK and Australia drive visual

research studies in higher education. Secondly, in European higher education research there is a prominence of international comparative studies which have national state and national higher education systems as the primary unit of comparison (Kosmützky 2015). Although presumably visual research methods could be utilised even in research focused on comparison of national higher education systems e.g. how higher education systems represent themselves, this has not been the case in practice. These two combined research tendencies, at least in the European context, result in research not being focused on differences across universities in different nation-states, but rather on dynamics of convergence of nation-states and universities towards worldwide models of progress (Kosmützky and Nokkala 2014; Ramirez and Tiplic 2014). Research across differences based on visual elements and representations of higher education which are dominantly organisational, institutional, localised and contextual, rather than national and global, tend to be neglected in the mainstream higher education research discourse (at least in the European context) or limited to issues of higher education marketing and promotion.

The importance of embracing the visual turn in the study of higher education is even greater given the observed trend of proliferation and increased importance of visually rich web-based communication by universities (communicating via websites and social media) (Metcalf and Blanco 2019). The last point and the observed proliferation of web-based communication in higher education contexts brings us to the second big turn which sets methodological challenges and potential for social research across similarities and differences – the digital turn. Social research in general and higher education research in particular has not only been challenged to fully incorporate visual data and research techniques, but also to respond to the digital turn and to go beyond visual into the sphere of multimodal data such as websites, social media communications and other elements of cyberspace in which individuals and organisations act and

communicate. Cyberspace as the second space of social action (Kellerman 2014) is and should be understood as an integral part of contemporary societies and not as a 'parallel' virtual universe. This should be particularly relevant for the study of higher education institutions and their place in society. In the case of organisations like universities, institutional websites usually represent the first point of contact and interaction between a university and a student (rather than the physical university) and therefore should constitute an indispensable object of analysis of differences across higher education institutions and systems. Researching websites (as well as other elements of the cyberspace) brings additional methodological challenges to the already challenging practice of visual research methodologies based on two or three dimensional visual media (pictures, photographs, maps, graphs, videos, architecture etc.).

The first significant methodological challenge is website multimodality, that is the integrated use of different communicative resources such as language, image, sound, and music etc. Too often website studies in social sciences focus dominantly on interpretation of websites solely through their verbal dimensions as texts, while other website elements remain under-researched (Pauwels 2012). The second major methodological challenge is the co-creative nature of the websites which in the case of large organisations like universities do have multiple authors who constantly create website content, making the traditional author-audience-observer interpretative frameworks characteristic for reflective visual research more complex (Pauwels 2012). The constant changing nature of the websites and the lack of adequate archiving practices represent the third major methodological challenge. Website based studies of differences within and across organisations over time in the context of this problem are especially challenging. Despite all these methodological challenges, the potential for study of similarities and differences in higher

education using university websites are many and exciting as the following sections will illustrate.

Choices in the Research on Similarities and Differences between Higher Education Institutions based on University Websites

Before embarking on the analysis of websites aimed at better understanding of similarities and differences across higher education institutions, researchers are faced with a series of important research design choices². In comparative studies of higher education institutions, including those based on university websites, there are two main comparative design issues. Firstly, and crucially, there is the need to reflect upon the intended purpose of comparison; and secondly, there is the choice of the comparative focus on particular organisational segments and processes which are particularly important in the case of complex organisations like universities. Related to the last point there is also a choice of whether to study website differences and changes across time or to focus of comparison of different websites observed in one snapshot of time.

Purposes of Comparison

The theoretical debates about comparison in the social sciences have been burdened by the restrictive views about legitimate kinds of comparisons, views that one must compare ‘like with

² There are general methodological and theoretical choices which are faced even without any comparative intentions: firstly the choice between the analysis of found or generated websites and the need to reflect on required visual competences (A. S. Metcalfe and Blanco 2019; Yanow 2014), secondly there is a choice of theoretical framework, and thirdly researchers have to consider ways in which they can address multimodality of websites and based on that choose adequate analytical technique(s) (Pauwels 2012). Although these choices are extremely important they are not the focus of this article and the special issue.

like', that units of comparisons e.g. nation states, should automatically be the source of explanations of similarities and differences, and most of all that comparison necessarily has to lead to a very specific type of explanation (Krause 2016 names this linear-causal explanation). The practice of comparison in social sciences has been always more diverse. Other purposes like description, concept development, critique and provision of different types of explanation are equally useful and legitimate (Krause 2016). One should also take into account this broader perspective when comparing differences across higher education institutions and systems using website analysis or other methods. The 'old' textbook approaches to comparison tend to equate comparative research with cross-national or international comparisons or 'cross-cultural' comparisons (Krause 2016) and this still dominates higher education research (Kosmützky 2015). These traditional comparative approaches share an underlying assumption about a linear-causal link between specific characteristics of units of comparison and existing observed differences within these units (Krause 2016). Similarly, this type of linear-causal comparison study often relies on the construction of 'model systems' that are usually over-researched national and institutional cases, privileged reference points, to which other cases are compared in order to establish the extent of convergence and divergence of differences (Bleiklie 2014; Krause 2016). For instance, one can analyse similarities and differences across university websites as an outcome of different cultures, different governance regimes and systems, or different higher education sub-sectors within each country e.g. private and public institutions. Other approaches and purposes of comparison across similarities and differences tend to be side-lined despite their evident potential. Comparing across similarities and differences can lead to the *development of new concepts and categories*, especially if comparisons depart from the existing units of analysis (Krause 2016). For instance, research across academic disciplines or higher education

institutional types can potentially reveal much more about the relationship of power and constructions of authority than institutional and country comparisons.

Comparing differences within and among organisations with the help of visual methods can have a *critique* as the purpose and the comparison is central to all critical intellectual traditions (Krause 2016), which aim at unsettling established views of the world and pointing at other ways of seeing the world, challenging ethnocentric, nationalistic and provincial assumptions. For instance, by placing two different university websites from different contexts in juxtaposition, one can see that conceptual frameworks about students, staff and higher education in general based on one type of context in which researcher is embedded, might be inadequate to understand diversity of higher education. In such a way, website comparisons can also serve as a way of *providing alternative explanations*.

Choice of the Organisational Aspects to Compare and Different Time Dimensions

When comparing similarities and differences across complex organisations like universities, visual studies of organisations including these based on the analysis of institutional websites, usually limit themselves to a particular organisational aspect. Based on the review of the previous compendiums of approaches to visual studies of organisations Metcalfe and Blanco (2019) identified the following list of organisational aspects which might be relevant for the study of differences across institutions of higher education: organisational, subgroup or self-identities and their relations, administration and governance, structure, aesthetics, environments, culture, change and technology. In the following table, we adapt the contextualisation of organisational aspects for the study of higher education topics from Metcalfe and Blanco (the

first and second columns) by providing examples of research questions suitable for web-site analysis (the third column). Identification of the ways university websites can be useful to study specific organisational aspects and the grouping of specific themes into categories provided by Metcalfe and Blanco (2019) is based on our interpretation of these topics for the context of website analysis and the overview of the topics of existing university website studies. The list of questions and aspects in the third column should be therefore interpreted as an illustrative list of examples not a finite list of possible topics.

Table 1: Organisational aspects in higher education and potential for comparative web-site studies

Organisational aspect	Relation to Higher Education Topics (based on Metcalfe and Blanco (2019))	Aspects of university websites potentially suitable for comparative study of the topic
Organisational Identity	Institutional identity, departmental culture, faculty working conditions	Differences in presence of university branding on websites, differences in sub-pages in different university sub-units, welcome and mission statements. Differences in institutional self-narratives and presentations in ‘About Us’ website sections.
Self-identity	Professional culture, academic identity, student life	Differences in projected self-identity in relation to organisation in staff profiles, student profiles, portrayal of student life.
Subgroup identity	Professional identity development, academic identity, academic socialisation	Differences in sub-pages in different university sub-units, differences across disciplines in the way they communicate and for instance construct students and applicants.

Organisational administration and governance	Leadership studies, professional identity development, administrative culture	The university leader presentations. Description and composition of governing bodies. The way university website users are constructed and understood and options they have to interact with universities. Relationship between university and main stakeholder groups. Differences in how different university websites are structured and navigated. General website usability studies.
Organisational structure	Campus environments, learning spaces, academic work	Differences in the ways different functions of the university are presented, differences in different disciplinary and departmental presentations, hierarchical structure of the university website and navigational pathways. Prominence of specific units, departments and individuals.
Organisational aesthetics	Campus environments, academic ceremonies, and traditions	Choice of colours, imagery on university websites, depictions of ceremonies and traditions. Conventions in depiction of specific university symbols.
Organisational environments	Learning spaces, corporatisation and privatisation, organisational change	External links on university websites, external stakeholder communication, outreach activities presented on university websites. Marketization of higher education and its impacts. Influence of broader social and economic processes on universities.
Organisational culture	Organisational culture, learning organisations	Ways different social subgroups are present and constructed on university websites (gender, race, disability, age etc.), linguistic diversity on websites.

		Conventions in presentation of specific annual events and ceremonies.
Organisational change	Organisational change	The way university websites changed over time under influence of internal and external factors. Implementation of particular university and national policies.
Organisational technology	Strategic planning communication	The way strategic planning and management is communicated on websites e.g. through use of charts, diagrams and power-points.

Beside the choice of the organisational aspect on which website analysis across higher education institutions can be focused, researchers can also opt to pursue synchronic types of analysis which analyse websites as captured at one particular time point. Another option is to have a diachronic analysis and observe the website change over time observing developments in university webpages captured at two or more points in time. In the following sections we analyse existing research articles also based on this important time dimension of the comparison.

Review of the Existing State of Higher Education Research based on Websites Analysis

This section of the article presents the systematic literature review of existing studies on differences in higher education organisations based on university and college websites. The aim here was to survey the current state of research practice and map it against the range of comparative research design options outlined in the first section (choice of comparative purpose,

choice of compared organisational aspect, choice between cross-sectional and longitudinal approach) and identify potential gaps for further research.

Method of the Literature Review

The systematic literature review was conducted within the Web of Science online database: an online subscription-based scientific citation indexing service maintained by Clarivate Analytics, that provides a comprehensive citation search, and which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline.

The search was conducted searching for the following phrases³: ‘university* website*’ or ‘college* website*’. The search for these phrases was conducted within titles, abstracts and keywords in May 2019 without any limitation in the search time-span covering publication up until that month. Further exclusions were performed either using the Web of Science online database options or by qualitative analysis of research abstracts in order to select articles that research similarities and differences across higher education institutions by using website analysis as the primary method. Firstly, only articles published in English were included in the literature search and review, omitting book chapters and conference proceedings. The research was then limited to publications in the research area of social sciences⁴ included in the Social

³ * denotes a place holder in order to include all endings of the word e.g. university, universities.

⁴ The web of science database category of social sciences includes: archeology, area studies, biomedical social sciences, business and economics, communication, criminology and penology, cultural studies, demography, development studies, education and educational research, ethnic studies, family studies, geography, government and law, international relations, linguistics, mathematical methods in social sciences, psychology, public administration, social issues, social sciences other topics, social work, sociology, urban studies and women’s studies.

Sciences Citation Index (SSCI) and Emerging Sources Citation Index. Furthermore in order to limit the overview to articles with a certain amount of impact in the social research community, only articles that had at least one citation were taken into consideration in the case of articles published before December 2017, while all articles published in 2018 and 2019 were included into analysis as they were published recently and therefore are unlikely to have citations. The list of reviewed articles was further reduced by scanning abstract content and including articles which satisfied following criteria: a) focus on website analysis with university websites and their elements being the primary object of study; b) include comparison of websites (exclude single case studies) and c) text of article fully accessible. After implementing all aforementioned inclusion criteria the final list contained 60 articles.

These were analysed by reading each article in full with special focus on the research design and methodology in order to identify aspects of comparative university website research design outlined in the previous section: a) organisational aspects and differences which are compared and if they are compared over time (longitudinal design) or in one point of time (cross-sectional design) and b) the purpose/rationale of comparison.

Brief analysis of the distribution of the 60 selected articles across time indicates that website analysis in higher education studies has been gaining popularity in the last decade and especially in the most recent years (e.g. there were only 6 articles based on university website analysis till 2010 while in 2018 alone 11 articles were published).

Findings

Comparing Differences across Countries and across Time

The vast majority of reviewed articles have analysed institutional websites across institutions within one country or federal state (52 articles) and only eight articles compare university websites both across institutions and countries. The single country studies which compare institutional websites within one country are mostly based in the large higher education systems of the USA and Canada. Cross-country comparisons usually compare websites from a small number of countries (1-6) or they compare a sample of universities from various countries based on global higher education league tables. A notable exception with regard to the number of websites and countries analysed is the longitudinal study of university website language choices by Callahan and Herring (2012) which followed 1140 university websites in 57 countries at three points over a five-year period.

The vast majority of studies have a cross-sectional design, analysing website materials collected once within a defined period of time (56 out of 60 analysed articles). Only four studies had a longitudinal approach and compared website versions across time. Besides the aforementioned study of Callagan and Herring (2012) about the use of languages in university websites, examples of longitudinal studies of higher education institution websites are the critical discourse study of Zhang and O'Halloran (2013) based on three different versions of the National University of Singapore website spanning a 14-year period and the study of perceptions of special education doctoral websites which utilised a survey of website users administered four times (Sundeen, Garland, and Wienke 2015). The methodologically interesting longitudinal

study of O'Connor and Yates (2014) of shifts in the representation of history and physics as named organisational units at Australian university websites compared university websites of all 39 Australian universities over a 15-year period using the Internet Archive 'Wayback Machine'⁵. Challenges these two researchers experienced with working longitudinally with university websites illustrate one of the methodological problems that explains the relative scarcity of longitudinal analytical approaches in website comparison. First of all, the Wayback Machine being the only publicly available source of historical website data limits the research to what this archive happens to capture. For example, seven public Australian universities studied by O'Connor and Yates (2014) had no pages stored in the archive at that time, and another two did not have clear evidence regarding the location of history due to missing pages and storage issues. The authors note that some sites are rarely if ever catalogued, as shown in the numbers of missing pages encountered in their study. These observations confirm the conclusions of other methodologists concerning the challenges for traditional research methods in internet research caused by the ephemeral nature of internet data, characterised by data abundance and the speed of change of online contents (Karpf 2012).

Comparing Different Organisational Aspects of Higher Education

In the previous section we illustrated the ways in which website analysis can be used to study differences in various organisational aspects of higher education institutions. In this section, we map the 60 articles based on their topics against the identified spectrum of organisational

⁵ The Internet Archive, a non-profit organisation in charge of building a digital library of Internet sites and other cultural artefacts in digital form, initiated the internet archiving Wayback Machine for storing websites in 1996.

aspects. Some articles cover more than one aspect, yet they are grouped based on the aspect which is in our view the dominant one. As we can see from Table 2, website analysis has focused on a limited number of organisational aspects of higher education institutions.

Table 2: Current state of research across differences in higher education organisations based on website analysis

Organisational aspect	Relation to Higher Education Topics (based on Metcalfe and Blanco (2019))	Topic and authors
Organisational Identity (14 articles)	Institutional identity, departmental culture, faculty working conditions	<p>Practices that institutions undertake to enhance the appearance of diversity on campus based on race/ethnicity table reporting (Ford and Patterson 2018)</p> <p>Branded university features and related constructions of students (Lazetic 2019)</p> <p>Work-life satisfaction university policies (Tower and Dilks 2015)</p> <p>Visibility and presentation of teaching and learning university profiles (Else and Crookes 2015)</p> <p>Communication of purposes of higher education (Saichaie and Morphew 2014)</p> <p>Legitimacy building of international branch campuses (Farrugia and Lane 2013)</p> <p>University brand and values communication (Chapleo, Durán, and Díaz 2011)</p> <p>Research mission of universities (Santiago, Carvalho, and Relva 2008)</p> <p>University presidents' messages and marketisation (Teo and Ren 2019)</p>

		Institutional identities, symbols and market strategies at various types of institutions (Milian 2017; Milian and Davidson 2018; Milian and Rizk 2018; Milian 2016; 2016)
Self-identity (9 articles)	Professional culture, academic identity, student life	<p>Student perceptions of excellence and diversity cues on university websites (Ihme et al. 2016; Ihme and Stuermer 2018)</p> <p>Student blogs within university websites (Tomaskova 2017)</p> <p>Study abroad student testimonials (Hanna 2016)</p> <p>Presentation of self in scholarly life in academic staff profiles (Hyland 2011)</p> <p>Images of students in study abroad programme website sections (Miller-Idriss, Friedman, and Auerbach 2019)</p> <p>Profiles and research productivity of accounting academics (Samkin and Schneider 2014)</p> <p>Student life construction (Svendsen and Svendsen 2018; Gottschall and Saltmarsh 2017)</p>
Subgroup identity (1 article)	Professional identity development, academic identity, academic socialisation	Presence and representation of disciplines on websites (O'Connor and Yates 2014)
Organisational administration and governance (8 articles)	Leadership studies, professional identity development, administrative culture	<p>Presence of democratic governance models in university digital communication (Radulescu and Papuc 2018)</p> <p>Dialogic interactive features on university websites (McAllister 2012b; 2012a; Shadinger 2013a; Gordon and Berhow 2009)</p> <p>General usability of university websites (Hasan 2013)</p> <p>Website usability and navigability of special education doctoral programmes (Sundeen, Garland, and Wienke 2015)</p> <p>Disability services information (Jackson and Jones 2014)</p>

Organisational structure	Campus environments, learning spaces, academic work	No articles
Organisational aesthetics (1 article)	Campus environments, academic ceremonies, and traditions	Images (buildings, campus views, university gates) used in marketing campaigns (Tang 2011)
Organisational environments (7 articles)	Learning spaces, corporatisation and privatisation, organisational change	Social responsibility communication of universities (Arceo 2018) Sustainability communication (Ott, Wang, and Bortree 2016) Marketisation and promotional discourses (Hoang and Rojas-Lizana 2015; Y. Zhang and O'Halloran 2013; Gottschall and Saltmarsh 2017; Yosef-Hassidim and Sharma 2018) Promotion of service-learning programmes to students (St. Clair and Tschirhart 2007)
Organisational culture (7 articles)	Organisational culture, learning organisations	Representation of international students (Z. Zhang and Tu 2019) Representation of disability and dyslexia (Collinson, Dunne, and Woolhouse 2012) Representation of Asian students (Wang and Cooper-Chen 2010) Representation and construction of autism (Nachman and Brown 2019) Digital campus climate for prospective LGBTQ+ community (Taylor, Dockendorff, and Inselman 2018) Language choices on university websites (E. Callahan and Herring 2012) Visual presentation of cultural dimensions (Hamid 2017)
Organisational change (13 articles)	Organisational change	Implementation of the campus sexual violence prevention act and guidelines, assault policies and rape prevention tips (Dunlap, Klein, and

		Woofter 2018a; Griffin et al. 2017; Graham et al. 2017; Lund and Thomas 2015a; Bedera and Nordmeyer 2015) Implementation of web usability guidelines for persons with disability (Bray and Sweatt 2018; Abu Shawar 2015; Solovieva and Bock 2014; Erickson et al. 2013; Kimmons 2017) Presence of policies against academic doping (Aikins, Zhang, and McCabe 2017) Mental health support policies (Laws and Fiedler 2013) Information and recommendation available for stalking victims (Truman and Mustaine 2009)
Organisational technology	Strategic planning communication	No articles

Based on this overview one can notice the absence of studies which address important organisational aspects of structure and hierarchies, disciplinary differences, leadership and management cultures as well as studies that examine university organisational sagas and developments over time. This finding also serves as an invitation for future studies of differences across university websites.

Comparative Purposes

Linear causal explanation. As we outlined in the previous section the main choice for social researchers in pursuing the study of differences, with any type of method, is to understand the purpose of comparison. The overview of the studies in this particular field and their methods confirm the dominance of the *linear causal explanation* logic used to understand observed differences (31 out of 60 analysed articles). Website differences are seen as the result of

demographic and geographic location (e.g. Arceo 2018; Griffin et al. 2017; Farrugia and Lane 2013), university characteristics in terms of student body composition (e.g. Bray and Sweatt 2018; Graham et al. 2017), institutional types (e.g. Kimmons 2017; Saichaie and Morpew 2014), belonging to different university self-created networks (e.g. Else and Crookes 2015), history and prestige of different institutions (e.g. Hoang and Rojas-Lizana 2015; O'Connor and Yates 2014), academic rank, discipline and gender of individuals whose profiles are analysed (e.g. Samkin and Schneider 2014). The *linear causal explanation logic* dominates especially in studies which analyse university websites across countries. As indicated previously, only eight out of 60 analysed articles compare university websites both across institutions and countries, giving an indication of the additional theoretical and methodological challenges that come with an additional comparative layer in the analysis. Some of the articles *do* compare countries, without any particular cross-country comparative theoretical framework that aims to explain social, economic and cultural differences between societies (Abu Shawar 2015; Arceo 2018; Tomaskova 2017; Samkin and Schneider 2014). In such articles variance across countries is explained in a purely descriptive and phenomenological way and the purpose of cross-country sampling of cases seems redundant and/or done for pragmatic reasons (e.g. linguistic competences and the background of the authors).

However, there are examples in which some form of theoretical framework was guiding the selection of countries and providing hypotheses for understanding the variance between institutional website features in different countries. The most frequently used theoretical framework that has underpinned many analyses of cross-national cultural differences (including comparisons of websites) is Geert Hofstede's cultural dimensions theory (Hofstede 2001; Hofstede 2011; Hofstede and Hofstede 2004). This theory argues that world cultures vary in

relation to four key dimensions: power distance, individualism vs. collectivism, femininity vs masculinity, and uncertainty avoidance. While this approach has been used quite widely in marketing and business analyses, only a limited number of studies have applied cultural theories to the analysis of university websites (Ewa Callahan 2005; Shyshatska 2016; Simin, Tavangar, and Pinna 2011; Jano et al. 2015).

Another alternative theoretical framework for understanding differences in university websites was used by Lazetic (2019) in his comparative analysis of university websites in European countries. In this case website differences in constructions of students are seen as a consequence of different higher education governance regimes prevalent in different countries (Dobbins, Knill, and Vögtle 2011).

Better description. As suggested by Krause (2016), comparisons can also have the purpose of better describing phenomena and questioning existing categories and explanatory frameworks. Within the analysed articles, 10 follow this comparative purpose. For instance, in their study of the portrayal of international students on Australian university websites, Zhang and Tu (2019) found that contrary to the expectation that international students would be portrayed as equal to other student groups, ‘studying and growing in the same way’, international students at two out of three analysed university websites were portrayed as ‘real, nonetheless, not comfortably engageable’ group (e.g., there was limited interaction between international students and the university in both the linguistic texts and images). These distinct discursive practices prompted authors to link the representation of international students in images and website texts to bigger issues that are being attended to in the literature, in particular apparent uncertainty in globalisation and internationalisation trends in the last two years within Australian context which

probably changed the dominant university conceptions about international students. Another example of questioning and redefinition of existing descriptive categories is the study of research image and web profiles of Portuguese universities (Santiago, Carvalho, and Relva 2008) in which, contrary to expectations, the authors found no significant differences between old and new public universities in their research image construction. That made the authors question and develop further classifications of knowledge production logics. Further examples are the studies of student constructions on university websites in Europe (Lazetic 2019) and images of students in overseas settings at US university websites (Miller-Idriss et al. 2019) which both question the dominant interpretative frameworks that emphasise commodification and marketization influences. Miller-Idriss et al. (2019 p.14) argue that images of students in overseas settings on university website subpages which promote study abroad, ‘must also be situated within the cultural context of elite American higher education, where college is not only seen as a utilitarian or academic pursuit, but is also—or perhaps mostly—understood as a time of fun, maturation, personal discovery, and self-transformation’. Similarly Lazetic (2019) concludes that in some European countries and institutions, the dominant student construction on university websites is as the recipient of public service and the novice in (academic community, rather than consumer or customer.

Critique. The comparison of the similarities and differences of university websites can also lead to critique or be led by critique which unsettles established views of the world and points at other ways of seeing the world, but also discloses hidden mechanisms of power and domination. Four out of 60 analysed articles clearly have this comparative purpose, although others e.g. those who dominantly seek linear causal explanation of differences, can have critical perspective on dominant discourses present on university websites. For instance, in their critique of the

construction of student experiences and ‘good life’ in institutional branding and marketing of Australian universities, Gottschall and Saltmarsh (2017) point out the implicit ‘racialised appeal’ of these constructs which promote not only making good choices based on future employment prospects but also in terms of life-style and leisure choices consistent with the concept of white privilege. Bedera and Nordmeyer (2015) for instance criticise existing college rape prevention tips in the USA as only directed to women, conveying the messages that there are no safe spaces for them and promoting mistrust and constructing them as vulnerable. Collinson et al. (2012) criticise the representation of disability and dyslexia on university websites in the UK, by pointing out the evident absence of visual representation of disability which ‘cross-cuts by other absences, in that most of the images studied include representations of young, healthy individuals who reflect dominant aesthetic standards’. This ‘glaring omission’, as the authors call it, is contrasted by messages in many universities’ homepages that promote the importance of personal experiences, enrichment of life and opening of future opportunities (Collinson, Dunne, and Woolhouse 2012).

Policy evaluation purposes. Finally, the remaining 15 out of 60 reviewed articles seem to have neither linear causal explanation, better comparison nor critique as their guiding motivation when studying differences across universities based on their institutional websites. These remaining 15 articles focus on evaluation of concrete institutional or national policies. Although the articles that primarily have critique as the purpose also criticise broad institutional policies and attitudes towards specific group of people, they do not address particular policy instruments and implementation of these instruments. The majority of articles aiming at policy evaluation purely make an inventory of specific texts or website features and categorise them in order to assess the extent of compliance of university websites with specific policies, recommendations

and guidelines. These articles mainly map differences without any attempt to explain them. Examples of such articles are those that analysed how universities in the USA comply with gender-based violence and anti-stalking regulations, which demand that specific prevention information should be prominently displayed on homepages (Dunlap, Klein, and Woofter 2018b; Lund and Thomas 2015b; Truman and Mustaine 2009). In a similar way, articles evaluate policies with regard to website accessibility for people with disabilities (Solovieva and Bock 2014; Jackson and Jones 2014; Erickson et al. 2013), institutional policies regarding non-medical use of prescription stimulants in U.S. higher education (Aikins, Zhang, and McCabe 2017), work-life balance and flexible work policies at universities (Tower and Dilks 2015), advice provision for students with mental problems by Australian universities (Laws and Fiedler 2013), and presence of dialogic features at university websites (Shadinger 2013b; McAllister 2012a; 2012b).

Research Gaps and the Way Forward

The research into similarities and differences in higher education by means of websites analysis offers significant opportunities for researchers interested in the study of higher education institutions in their social context. This article has outlined multiple ways in which university website analysis could be utilised for these purposes, from simple policy evaluation, to critical examinations of organisation identities and deeper understanding of diversity and inclusion/exclusion mechanisms in higher education contexts. An especially fruitful area for future research would be the pursuit of greater understanding of organisational identity formation and interpretation for universities and other higher education institutions, beyond the usual study

of university missions and studies focused on branding and marketing (Metcalf and Blanco, 2019).

The comprehensive literature review on social research practice in university website based research looking at similarities and differences between higher education institutions, identified several analytical gaps in the current research practice. These gaps also point at the directions for new research, new theoretical frontiers and methodological advancements.

Firstly, the current state of research is largely cross-sectional, providing snapshot insights into institutional website communication at one point of time and limiting potential theoretical insights into processes of social, political and organisational change and the ways they reflect upon website communication. The use of archived websites within the Internet Archive ‘Wayback Machine’, for the study of change over time, is extremely rare in social science research and, despite imperfections, it is still to really be fully exploited by social scientists.

Secondly, the differences in some organisational aspects of universities seem to be much more popular topics of research than others. Issues related to institutional identities and positioning of individual self-identities towards institutions seem to be very popular as well articles that explore organisation cultures in terms of representations of different types of students on university websites. Organisational aspects of structure and hierarchies, disciplinary differences, leadership and management cultures, organisational aesthetics as well studies which focus on representation of non-student groups of university members, are extremely rare and represent potential research frontiers.

Thirdly, the analysis of differences across university websites is often guided too much by linear causal explanation logic, while other comparative purposes like better description, critique and

provision of alternative explanations, are less present and potentially could lead to a much better understanding of higher education.

Lastly, cross-country comparisons of institutional websites are too often not guided by any theoretical framework that aims at understanding cross-country variance in websites. Country selection is often guided by convenience and the description of existence of differences remains without major theoretical anchoring. The major comparative frameworks used to understand differences in institutional websites are borrowed from comparative cultural studies (Hall 1976; Hofstede 2001; Hofstede 2011; Gesteland 2002) which tend to have very monolithic and static views of cultures. The search for alternative comparative explanatory frameworks is ongoing and such frameworks are yet to be utilised in studies that compare institutional websites. For example, the use of rich insights from the field of design and gender aesthetic preferences in website design and perceptions of websites (Moss 2009; Moss, Gunn, and Kubacki 2008) offer one potential explanatory framework in comparative website research. Another source of potential comparative explanations could come from the teaching of new institutionalism and related studies on different political regimes, welfare states, governance systems and institutional change. These theoretical perspectives offer the potential for new and better understanding of differences in cyberspace and institutional websites across countries, institutions and time.

This article has been primarily written as an encouragement to higher education researchers to respond to the visual and digital turn in social research and to develop further understanding of universities in cyberspace. Having said that, one final point can be made in support of website analysis as a research approach. Although website analysis in its full extent is potentially time and cost demanding, it is also one form of research that can be done (albeit on a smaller scale)

without external funding – and in the current climate of increasing competition for grant funding, this might contribute to a rise in popularity and motivate new researchers of higher education.

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